



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/722,837 | 11/26/2003 | Yulun Wang | 022001-000902US | 9225 |
| 20350 | 7590 | 10/20/2004 | EXAMINER | |
| TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834 | | | FARAH, AHMED M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3739 | |

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,837

Applicant(s)

WANG ET AL.

Examiner

Ahmed M Farah

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble of claim 1 recites “**an interface** for coupling an input device.” This recitation is treated that the claimed element is the interface, not the combination of the interface/input device. The phrase “for coupling an input device” is merely suggested/intended use. Furthermore, since claim 1 is directed to only an interface, the positive recitation “**an input device** coupled to said first and second output channels” makes the scope of the claim indefinite. To overcome this rejection, the Examiner suggest modification of the claim language, such as --an interface **adapted** for coupling an input device--; and --an input device **adapted** to be coupled to said first and second output channels-, respectively.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3739

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-5, 8-10, 12, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Brant et al. U.S. Patent No. 6,278,975 B1.

Brant et al. disclose a voice command and control medical care system comprising: an input device, speech interface, switching interface, output channels, and plurality of surgical devices (see Figs. 2-4).

As to claims 1 and 5, Brant et al. disclose an interface device (control circuitry within main console **38**) for coupling an input device (input switches **72**) to a first surgical apparatus (vitrectomy cutter **32**) and a second surgical apparatus (fragmentation handpiece **34**), the device comprising:

an interface that has a first input channel coupled to the input device (unidentified bus connected to input switches **72**), a first output channel coupled to the first surgical apparatus (electrical line **46** connected to vitrectomy cutter **32**), a second output channel coupled to the second surgical apparatus (electrical line **46** connected to fragmentation handpiece **34**), and a select channel (function select switches **60**, **62**, **64**, etc.) that switches the first input channel between the first output channel and the second output channel; and

a speech interface (microphone **26**, computer **18**, etc.) which receives commands from a surgeon and provides command signals to the select channel (column 6, lines 8-57).

The function of input switches **72** changes depending upon which function select switch is selected, e.g., function of switches **72** is different for vitrectomy mode (function select switch **60**), fragmentation mode (function select switch **62**), scissor mode (function select switch **64**), etc. (see column 5, lines 27-38, and column 8, lines 40-49);

As to claims 5 and 9, the speech interface (microphone **26**, computer **18**, etc.) provides a control signal to the first and second surgical apparatus (via function select switches **60**, **62**, **64**, etc.), and the first input channel (unidentified bus connected to input switches **72**) is coupled to the speech interface (see claim 6). As to claim 12, the surgical device includes a laser (column 3, lines 38-45 and claim 8).

As for claim 19, the method for operating the first (vitrectomy cutter **32**) and the second (fragmentation handpiece **34**) surgical apparatuses from the input device (input switches **72**) includes the steps of:

a) providing speech interface (control circuitry within main console **38**, computer **18**, microphone **26**, speech recognition software, etc.) that has a first input channel coupled to the input device (unidentified bus connected to input switches **72**), a first output channel coupled to the first surgical apparatus (electrical line **46** connected to vitrectomy cutter **32**) and a second output channel coupled to the second surgical apparatus (electrical line **46** connected to fragmentation hand piece **34**);

b) switching the interface in response to an audible command so that the first input channel is coupled to the first output channel; and

c) switching the interface in response to an audible command so that the first input channel is coupled to the second output channel (see column 3, lines 32-35, 46-

49, and 53-63; column 5, lines 13-21 and 27-38; and column 6, lines 12-18; and claims 29-46 of parent patent No. 5,970,457).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brant et al. in view of Wolf et al. "Student Reference Manual for Electronic Instrumentation Laboratories."

Brant et al., described above, do not teach the use of a multiplexer as an interface. Wolf discloses in Figs. 10-17 that multiplexer circuits typically have several input channels and a single output channel, with a decoder or selector circuit to control which input is coupled to the output. Conversely, it is well known in the art that demultiplexers are used to take a single input to a plurality of output channels under the control of decoder or selector circuit. Thus, it would have been obvious to one skilled in the art at the time of the applicants invention to modify Brant et al. with Wolf and use a multiplexer as an alternative interface, or circuit, that permits control of a multi-functional devices.

4. Claims 6, 7, 11 and 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brant et al. in view of Wang et al. U.S. Patent No. 6,102,850.

The surgical apparatus of Brant et al., described above, meets the limitations of the claims, except for using a robotic arm.

Wang et al. teach a surgical system comprising at least one surgical instrument and at least one robotic arm. Their system can be activated via voice control, foot switch, computer keyboard, etc. As to claim 13, the surgical systems of Brant et al. Wang et al. comprise surgical table, respectively. Therefore, it would have been obvious to one skilled in the art at the time of the applicant's invention to modify Brant et al. in view of Wang et al. in order to permit control of an additional surgical device in the form of a robotic arm. The use of robotic arm would enhance the precision of the surgical procedure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ahmed M Farah whose telephone number is (703) 305-5787. The examiner can normally be reached on Mon-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M DVorak can be reached on (703) 308-0994. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 3739

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. Farah,
Patent Examiner, AU 3739



10/16/2004.